An Innovative Approach for Training Acquisitions

Acquisition Research: Creating Synergy for Informed Change

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Training Capabilities Analysis of Alternatives (TC AoA) Background

- **Directed by Program Decision Memorandum 1, 12 Dec 02**
  - Terminated Joint Simulation System (JSIMS) on 30 Sep 03
  - Conduct an AoA beginning in FY03
  - Complete in 12 months
  - Identify cost-effective methods for Joint & Service Training

- **Final Report Completed 30 July 2004**
  - Provided a series of recommendations for enhancing training and training systems
  - Provided a base line of existing Joint and Service Training M&S programs based on FY05 to FY 09 FYDP
  - Identified “other issues” key to enhancing training: Multi-level Security, GIG, Common Data, and Live-Virtual-Constructive Environments

TC AoA Selected Findings & Observations

- **Management & oversight more than technology has caused failure of previous joint training simulation efforts**

- **Current joint training has been largely based on training exercises supported by simulations**
- **Not all training issues are cost effective for large scale simulation applications**
  - **Alternative training methodologies may provide more cost - effective solutions**
  - **Many COCOM training requirements are not filled by joint exercises and large simulations**
- **Intelligence must be part of training audience vice training aid**

TC AoA Recommendations

1. **Management Decisions**

2. **Include Intelligence as partner in joint training**

3. **Simulation Option (Alt #3)**
   - Large simulation federations to support joint training exercises, events, and activities

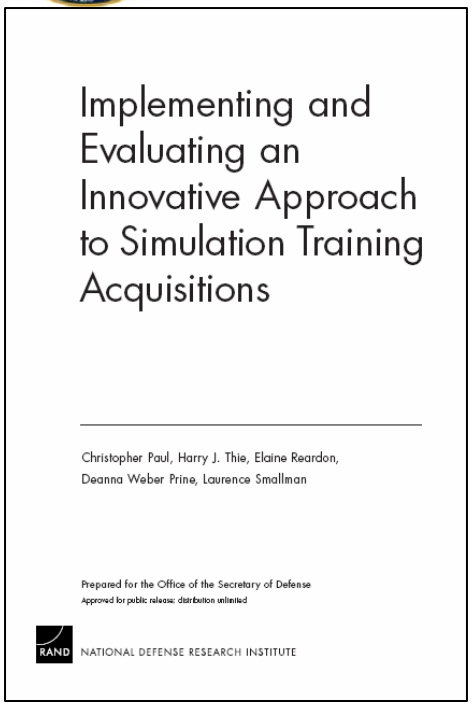
4. ***Acquisition Prototype Option (Alt #4)***
   - Innovative acquisition for training tools and services

5. **Re-engineering Training Option (Alt #5)**
   - Application of technologies such as gaming, story driven, and light or functionally specific simulations

What Does Alt#4 Address?

- TC AoA Alt #4 suggests two core problems with the “old way” of doing business:
  - **Ownership of tools**
    - High “switching cost”
    - All updates must be paid for, no way for alternative technologies to compete
    - Arcane/proprietary knowledge (The “100 men in white suits” problem)
  - **“Cost plus” contracts**
    - No incentive for efficiency
    - Perverse incentives to make vs. buy

RAND TC AoA Alt #4 Study



- RAND was asked to prepare an ***implementation and evaluation plan*** for a prototype of the TC AoA Alt #4 business model.
- RAND report MG-442-OSD, ***Implementing and Evaluating an Innovative Approach to Simulation Training Acquisitions***, by Christopher Paul, Harry Thie, Elaine Reardon, Deanna Weber Prine, and Laurence Smallman, accomplishes both of these tasks.

Key Findings :

- A review of economic theory and relevant real-world experience suggests that Alt #4 is based on sound economic principles.
- Theory and experience also suggest that implementation of Alt #4 will face several challenges and risks.
- The theoretical promise and empirical uncertainty faced by Alt #4 make it ideal for a prototype implementation.

Training Capabilities Analysis of Alternatives (TC AoA) Alt #4

Definition

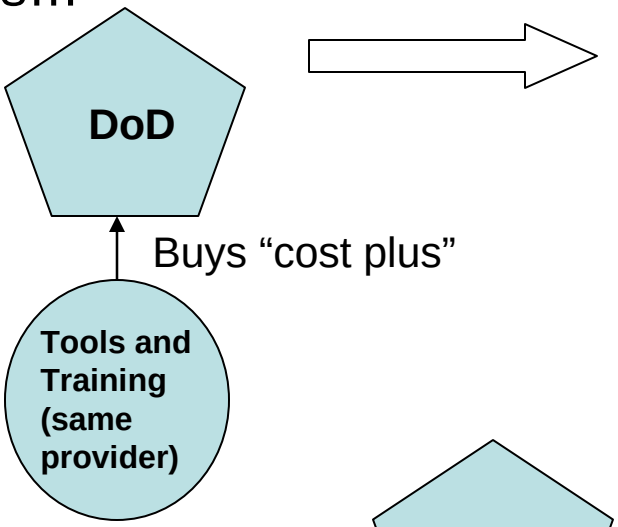
- A reengineered business practice that uses ***training service providers (TSP)*** and tool vendors to provide joint training.
- Government contracts with TSPs to provide a ***fixed amount of training*** for a firm fixed price.
- TSPs utilize ***industry sources for training package*** tool support. Shifts tool development away from Government.
- Government may provide seed funding for tool development.

Characteristics

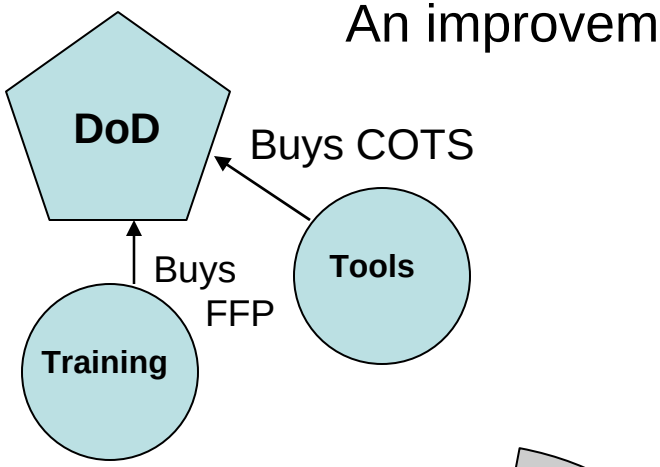
- DoD requires a prototype effort to assess the viability and effectiveness of the TC AoA Alt #4 Approach.
- The prototype effort must embrace the concepts identified by the AoA and the subsequent RAND study.
- Prototype targeted training tasks (Training User) should lend itself to mixing military and commercial technology for this first time effort.

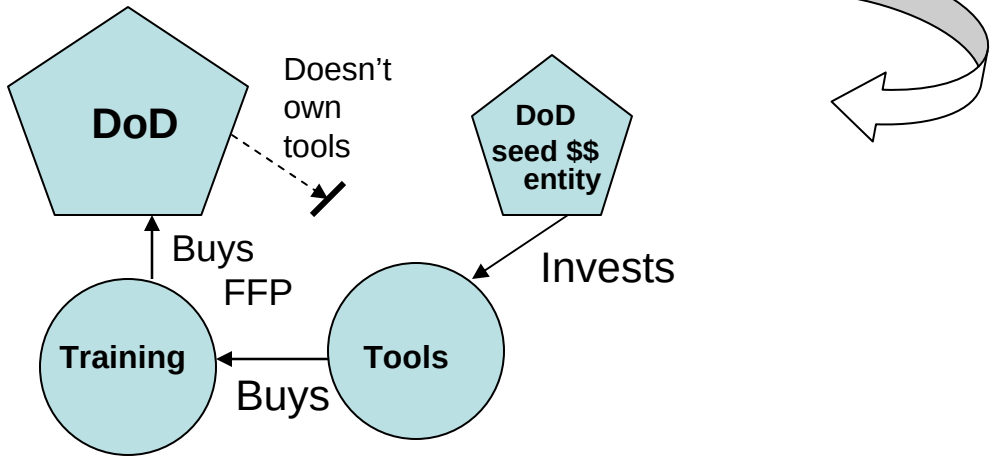
Transformation Envisioned by Alt#4

The old way of doing business…



An improvement…





The goal of TC AoA Alt #4.

Not Everyone Agrees

See Notes


United States Government Accountability Office
Report to the Subcommittee on Readiness, Committee on Armed Services, U.S. House of Representatives

September 2006

CONTRACT MANAGEMENT

Service Contract Approach to Aircraft Simulator Training Has Room for Improvement

GAO

GAO-06-830

GAO asked to study AF Service contracts for F-15C, F-16, AWACS, and F-15E, as well as Arm Flight School XXI (GAO-06-830).

Asked by Congress to address:

- Factors leading to service based approach and whether decision was adequately supported
- Whether implementation of approach has resulted in planned number of service sites being activated
- Whether AF & Army are effectively tracking ROI

Key Findings :

- AF & Army turned to service contracts because modernization of existing resources had lost competition. Not supported by thorough analysis
- While new simulators were an improvement, the expected number of sites were not established and will yield training gap
- ROI tracking was not effective due to limited use of paid for services, limited insight into developing services, and award term laxness

Challenges and Risks Facing the Prototype

- **Theory and experience revealed several challenges and risks facing the prototype**
- **All are not of equal magnitude, but any could threaten the success of the prototype if not successfully mitigated**
- **Challenges:**
  - **Standards setting**
  - **Legally and effectively investing seed money**
  - **Identifying emerging needs**
  - **Soliciting requirements vs. "desirements"**
  - **Performance measurement in FFP contracts**
  - **Risk**
    - **Risk associated with market assumptions**
    - **Risk the prototype will not really be Alt#4**

TC AoA Alt #4 Use Case Overview

- **National Guard Bureau (NGB) in Homeland Defense**
  - Emphasis on Chemical, Biological, Radiological, Nuclear, Explosive (CBRNE) incident management
- **Training Package: CBRNE Enhanced Response Force Package (CERFP)**
  - Objective: eliminate existing NGB gap in training continuity
  - Gap created due to NGB unit turnover & annual recertification
- **Current Training Demand: 17 CERFP teams (186 members each)**
  - Mix of contractor courses, Service course, on-line FEMA course, classroom instruction, hands on training, graded collective exercise
  - NGB uses Joint Interagency Training and Education Center (JITEC)
    - Challenge to put together Mobile Training Teams (MTTs)

DoD Modeling and Simulation (M&S) Management & Coordination

New M&S Management Structure Organized by Communities.
Designed to Support & Integrate M&S Activities across the Department.
Led by a 1 to 2 Star M&S Steering Committee (M&S SC) to provide governance.

Acquisition AT&L	**Analysis** PA&E & JS	**Planning** JS & Policy	**Testing** DOT&E & AT&L	**Training** P&R	**Experimentation** JFCOM

M&S Practices

Common and Cross-Cutting M&S Tools

Common and Cross-Cutting M&S Data

Common and Cross-Cutting M&S Services

(SE FORUM) **(JADM)** **(AP EXCOM)** **(T2)** **(JCDE EC)**

Components

OSD, Joint Staff, COCOMs, Services

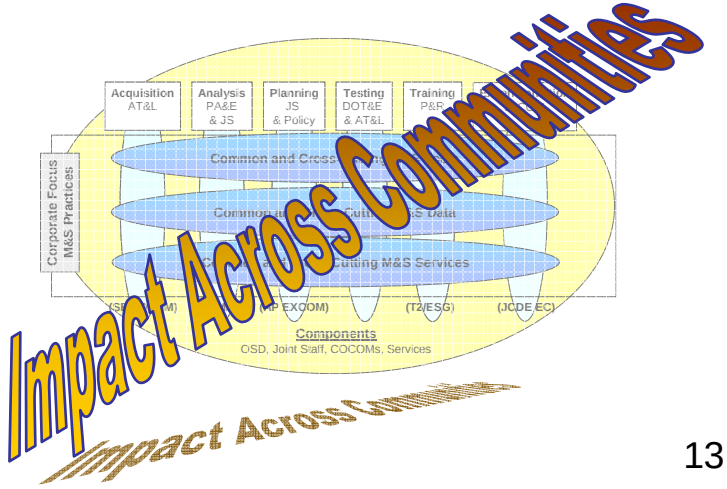
Goal: Establish corporate M&S management to address DoD goals: Leads/guides/shepherds the $Bs in DoD M&S investments; adds value thru metrics & ROI-driven priorities; and seeks to provide transparency.

Examples of M&S SC Project Investments

- **Established Standards**
  - HLA Revision, VV&A Overlay, Proponency & Testing
  - VV&A Recommended Practices Guide (RPG) & Templates
  - SEDRIS Sustainment & SEDRIS Spatial Ref Model
- **Emerging Standards**
  - Basic Object Model (BOM) Standard
  - Joint Battle Mgt Language (JBML)
    - M&S COI Metadata
- **Common Tools**
  - Environmental Scenario Generator
    - Environmental Data Cube (EDC)

FY06 Funding. Others FY07 Funding

- **Shared/Sharable Processes**
  - Educating the M&S Workforce
  - Validation Methods for Agent-based Simulation
- **Vision/Guidance/Recommendations**
  - Joint Data Alternatives (JDA)
  - Live, Virtual, Constructive Architecture Roadmap
    - M&S Business Model
- Desired Endstate:



Questions?

Do we need to (how can we) improve the Defense Acquisition Process to ensure systems interoperability and reuse?

Who derives and enforces appropriate standards for data, architectures, and simulation applications/modules for interoperability and reuse?

Who sponsors the business case to reward data “owners” for the additional cost of tagging and maintaining for reuse?